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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,046	11/21/2001	Julian Marshall	5809.P003	4475

7590 10/01/2004  
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EXAMINER
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LUU, MATTHEW

ART UNIT	PAPER NUMBER
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2672

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DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/992,046

Applicant(s)

MARSHALL ET AL.

Examiner

LUU MATTHEW

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on September 07, 2004 (Interview Summary).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-14,38-43,46,89 and 100 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14,38-43,46,89 and 100 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. <u>11</u> .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____.  | 6) <input type="checkbox"/> Other: _____.                                   |

### DETAILED ACTION

1. The Applicant elected Group III, claims 8-14, 38-43, 89 and 100 for examination.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-14, 38-43, 89, and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 2003/0212327) (hereinafter Wang) in view of Bodicker et al (US 2002/0193676) (hereinafter Bodicker).

Regarding claim 89, Wang discloses (Figs. 1, 3, and 4) a method of displaying medical images from a computer aided diagnostic (CAD) system (page 4, section [0050]), comprising:

Identifying a medical image based on an image identification (Fig. 3, steps 304 and 306) (page 6, sections [0063, 0064]);

Identifying a lightbox for the image and highlighting the identified lightbox on a lightbox icon (Fig. 14, step 1406; Fig. 15, active icon member 1510) (page 10, section [0085]);

displaying the image to the user;

displaying a plurality of lightbox icons for selection (Fig. 15 thick-slice array 1502), and the user select a lightbox layout corresponding to an actual layout at a

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current location (the current location is the highlighted active member 1510) (page 6, section [0064]).

The only difference between the disclosure of Wang and the claimed invention is that claim 89 requires the step of prompting the user for selection. Furthermore, Wang fails to explicitly teach that his medical images are iconic images.

However, it would have been obvious to a person of ordinary skill in the art to recognize that the step of prompting a user for selecting an iconic representation, a thumbnail, a window menu, or a menu item in a graphics user interface (GUI) system is well known in the art.

Bodicker, from the same field of endeavor, discloses (Figs. 7 and 8) the iconic medical image layout being displayed on a screen for user selection. See page 4, section [0059] to section [0064]. Thus, It would have been obvious to the person of ordinary skill in the art to use the iconic medical image layout of Bodicker into the medical image layout of Wang to provide more user friendly and more intuitive for a user to select and view in a more convenient and sufficient manner.

Regarding claim 100, Wang discloses (Fig. 1 and 18-20) the x-ray viewing station (109) may range from a simple light box, as in Fig. 1, to more complex x-ray mammograms past the radiologist (124) on a conveyor belt as a nearby CAD display highlights suspicious areas of the mammogram (page 4, section [0050]). Furthermore, Wang further discloses (Fig. 19) a previous slab key (1904) allows the user to view the previous image (page 11, section [0095]). Bodicker further discloses (Fig. 9) a previous button (70).

Regarding claim 38, Wang discloses (Figs. 1, 3-4, and 18-20) an independent display system for a computer aided diagnostic (CAD) system (page 4, section [0050]), comprising:

- a display (Fig. 18, a display unit 1804);

- a user interface (Fig. 19) to permit a user to interact with the display;

- a layout indicator shown on the display indicating a lightbox to which a currently displayed image corresponds (Fig. 14, step 1406; Fig. 15, active icon member 1510) (page 10, section [0085]) ;

- wherein the layout indicator comprises:

- an icon (Fig. 15, icon 1522) of the independent display system positioned in proximity of one or more icons of light boxes, reflecting an actual layout in a current location (Fig. 15 thick-slice layout 1502; and the current location is the highlighted active member 1510) (page 6, section [0064]).

Wang fails to explicitly teach that his medical images (1522) are iconic images. However, since Wang mentions that his medical images can be the thumbnail images (page 5, section 0053), it would have been obvious to a person of ordinary skill in the art to recognize an iconic representation, a thumbnail, a window menu, or a menu item can be considered as an icon.

Furthermore, Bodicker discloses (Figs. 7 and 8) the iconic medical image layout being displayed on a screen for user selection. See page 4, section [0059] to section [0064]. Thus, It would have been obvious to the person of ordinary skill in the art to

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user the iconic medical image layout of Bodicker into the medical image layout of Wang to provide more user friendly and more intuitive for a user to select and view in a more convenient and sufficient manner.

Regarding claims 39-41, Bodicker discloses (Figs. 5-8) the iconic medical image layout being displayed and altered on a screen for user selection. See page 4, section [0059] to section [0064].

Regarding claim 42, Wang discloses (Fig. 1) wherein the display (126) is a touch screen (page 5, section 0052).

Regarding claim 43, note the rejection as set forth above with respect to claim 42. Furthermore, Bodicker also discloses (Figs. 7 and 8) the iconic medical image layout being displayed on a screen for user selection. See page 4, section [0059] to section [0064].

Regarding claim 46, Wang discloses (Fig. 1 and 18-20) the x-ray viewing station (109) may range from a simple light box, as in Fig. 1, to more complex x-ray mammograms past the radiologist (124) on a conveyor belt as a nearby CAD display highlights suspicious areas of the mammogram (page 4, section [0050]). Furthermore, Wang further discloses (Fig. 19) a previous slab key (1904) allows the user to view the previous image (page 11, section [0095]). Bodicker further discloses (Fig. 9) a previous button (70).

Regarding claim 8, Wang discloses (Figs. 1, 3-4, and 18-20) an independent display system for a computer aided diagnostic (CAD) system (page 4, section [0050]), comprising:

in input mechanism (Fig. 3) to receive an identifier for a medical image (Fig. 3, steps 304 and 306) (page 6, sections [0063, 0064]);

a touch screen(126)(page 5, section 0052).

a plurality of icons is a layout indicator shown on the display indicating a lightbox to which a currently displayed image corresponds (Fig. 14, step 1406; Fig. 15, active icon member 1510) (page 10, section [0085]);

Wang fails to disclose the medical image including any marked regions of interest.

However, Bodicker also discloses (Figs. 7 and 8) the iconic medical image layout being displayed on a screen for user selection. See page 4, section [0059] to section [0064]. Bodicker further discloses the medical image including any marked regions of interest (page 1, sections 0012-0013). Thus, It would have been obvious to the person of ordinary skill in the art to user the iconic medical image layout of Bodicker into the medical image layout of Wang to provide more user friendly and more intuitive for a user to select and view in a more convenient and sufficient manner.

Regarding claim 9, Wang discloses (Fig. 1 and 18-20) the x-ray viewing station (109) may range from a simple light box, as in Fig. 1, to more complex x-ray mammograms past the radiologist (124) on a conveyor belt as a nearby CAD display highlights suspicious areas of the mammogram (page 4, section [0050]). Furthermore,

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Wang further discloses (Fig. 19) a previous slab key (1904) allows the user to view the previous image (page 11, section [0095]). Bodicker further discloses (Fig. 9) a previous button (70).

Regarding claim 10, Wang discloses an icon (Fig. 15, icon 1522) of the independent display system positioned in proximity of one or more icons of light boxes, reflecting an actual layout in a current location (Fig. 15 thick-slice layout 1502; and the current location is the highlighted active member 1510) (page 6, section [0064]).

Regarding claims 11-13, Bodicker discloses (Figs. 5-8) the iconic medical image layout being displayed and altered on a screen for user selection. See page 4, section [0059] to section [0064].

Regarding claim 14, Bodicker also discloses (Figs. 7 and 8) the iconic medical image layout being displayed on a screen for user selection. See page 4, section [0059] to section [0064].

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Dupree et al (6,788,969) disclose interactive systems and methods for controlling the use of diagnostic or therapeutic instruments in interior body regions (the regions of interest).

-Banks et al (US 2004/0024303) disclose a universal interface apparatus for use with any of several different imaging systems for facilitating a plurality of different



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imaging modalities, the interface including at least function icons in a function navigation space and a work space.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUU MATTHEW whose telephone number is (703) 305-4850. The examiner can normally be reached on 9 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAZAVI MICHAEL can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Luu



MATTHEW LUU  
PRIMARY EXAMINER